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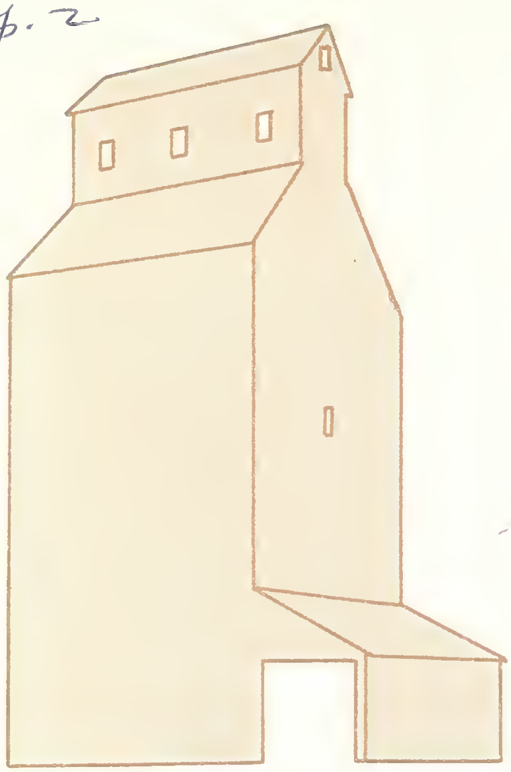

Farm Supply Operations of Cooperative Gins and Elevators in Texas

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by John M. Bailey

Farmer Cooperative Service
U.S. Department of Agriculture

General Report 92
July 1961

FARMER COOPERATIVE SERVICE
U. S. DEPARTMENT OF AGRICULTURE
WASHINGTON 25, D.C.

Joseph G. Knapp, Administrator

The Farmer Cooperative Service conducts research studies and service activities of assistance to farmers in connection with cooperatives engaged in marketing farm products, purchasing farm supplies, and supplying business services. The work of the Service relates to problems of management, organization, policies, merchandising, product quality, costs, efficiency, financing, and membership.

The Service publishes the results of such studies, confers and advises with officials of farmer cooperatives; and works with educational agencies, cooperatives, and others in the dissemination of information relating to cooperative principles and practices.

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Highlights and Suggestions

This study was undertaken to determine: (1) Possible advantages or disadvantages of adding farm supply services to gin and elevator operations, (2) problems that might be encountered, (3) benefits to farmers, and (4) policies and methods that have resulted in efficient operations. Texas agricultural leaders are concerned that in 1958-59 Texas farmers purchased cooperatively only 4.2 percent of their total farm supplies compared to a U.S. average of 14.5 percent.

Personal interviews with managers or other key employees of 26 cooperative gins and elevators provided information on operating results, policies, practices and problems, and on advantages and disadvantages of handling supplies.

Development of Supply Services

Farm supples were handled by seven associations before 1940, nine added supplies during the 1940's, and nine others started handling supplies in the 1950's. Data were not available for the other association.

These cooperatives began handling one or two major supply items and added others until categories handled by 20 associations in 1960 were as follows: Feed by 12; hardware and miscellaneous items by 12; fertilizer by 11; petroleum service station items by 9; insecticides by 9; butane by 6; and liquid petroleum products by 5 associations.

Reasons given for handling supplies were: (1) To reduce costs, (2) to provide a new or better service, (3) to better utilize labor, (4) to maintain contacts with farmers, and (5) to help increase marketing volume.

Problems these associations encountered when initiating farm supply services included: Controlling open-account credit, raising capital, and obtaining volume.

Supplies best suited for beginning a supply operation were those of general use in substantial quantities by farmers such as feed, fertilizer, fuel, insecticides, and seed.

Factors mentioned as important in establishing a supply service were: (1) Existence of a real need; (2) enthusiastic attitude of manager; (3) satisfactory source of supply; and (4) care in handling inventory and credit business.

Operating Results

Farm supply volume per association ranged from a low of around $60,000 to a high of about $450,000, with an average near $193,000.

Feed was the most common item handled by the associations; petroleum and fertilizer accounted for the biggest share of volume.

Gross margins were highest on butane and lowest on insecticides. Average gross margin for all items in all associations was 16.4 percent of sales; the range was from 6 to 40 percent. Expenses averaged 14.4 percent and ranged from 6 to 29 percent. Labor was the largest expense item, averaging 55 percent of total expenses.

Net operating margins averaged 2.4 percent and other income averaged 0.9 percent. Total net margins averaged 3.3 percent of sales, ranging from a low of -0.6 to a high of 11.4 percent.

Credit was extended for about 75 percent of retail sales volume. Average credit outstanding at year-end was just over $37,000 an association, equal to about 17 percent of sales; or by other measures to 52 days of total retail sales and to about 68 days of credit sales. Estimated peak volume of accounts was $50,000 and the low was $20,000 among the associations in the study.

Inventories averaged more than $30,000 and turnover was 8.5 times a year.

Average capital requirements for a farm supply operation in this study approximated $100,000, including about $15,000 for buildings and equipment.

Policies and Practices

Additional facilities were required at 11 associations when they initially began providing farm supply services. Most managers thought facilities at time of survey were generally adequate although some needed additional storage space and improved display area.

Purchasing practices aimed at reducing cost of goods and amount of capital in inventory were carload purchasing, consignment, pooling of orders, and taking off-season and wholesale discounts.

Inventories were generally maintained on a minimum-maximum basis -- that is, having enough but not too much. Available storage space and capital limited the size of some inventories. In 13 associations, stocks of most items were counted once a year while monthly inventories were taken in 9 associations.

Managers of eight associations made no special merchandising efforts. Increased sales were sought through advertising and personal contacts by five associations. Newspaper ads and mail-outs were the advertising techniques used most for promoting sales.

Selling prices were influenced about equally by competition and suggested retail prices. Volume discounts were given on feed and fertilizer items. Feed and hardware groups presented the greatest pricing problems.

Credit was widely used by all associations in this study except three that followed a cash policy. Policy in 18 associations stipulated 30-days credit but in practice there were exceptions.

Managers stated that credit policies generally were made known to patrons - mostly by oral statements.

About one-half of the associations converted old open accounts to notes. Interest rates ranged from 8 to 10 percent with time limits from "demand basis" up to a year.

Boards of directors reviewed credit operations but regularity of review and procedure varied considerably.

In both elevator and gin associations, farm supply patrons outnumbered the marketing patrons. This fact indicates that farm supplies might help to increase marketing volume.

Problems associated with present farm supply operations of cooperative gins and elevators related mostly to those of inventory and credit control.

Effects of Handling Supplies

Findings of this study and other research indicate that adding farm supply services in marketing cooperatives usually would have the following advantages and disadvantages:

Possible Advantages

1. Total operating costs per unit may be reduced. One way cost reduction can be achieved is by better utilization of labor. Management skills and salary can be spread over more operations. Labor not fully employed but on the payroll the year around can be more gainfully utilized as the seasonal business peak is generally at different times for supply and marketing operations. This is particularly true of some gin and elevator employees and bookkeeping personnel. The farm supply operation of an association sharing the labor of a manager, clerk, bookkeeper, and one other employee would, on the basis of associations in this study, carry a labor cost of around $8,500. In many associations performing only marketing services, much of this shared labor would be carried as an unproductive marketing cost.

Costs can also be lowered by spreading the fixed costs of facilities and equipment. Depreciation and interest on facility capital are two constant costs paid by patrons. They are less of a burden if spread beyond marketing to include farm supplies and services.

2. Marketing volume may be increased by including farm supply and other services. Many patrons of the new services also become marketing patrons.

3. Savings on supplies needed by farmers can be achieved by purchasing through cooperative wholesale and manufacturing organizations. In many areas, the wholesale patronage savings returned to local associations from regional cooperatives are greater than the savings in the local retail operations.

4. Better services to farmers may be provided through cooperative control and quality programs. These benefits have been particularly recognized in seed, fertilizer, and feed items where farmers own and direct procurement and production activities.

Possible Disadvantages

1. Labor may be inefficient if spread over several operations. An effective gin hand may not be adapted to retail supply operations. Likewise, ability to merchandise and meet patrons may be of little value in ginning.

2. The need for increased capital may slow down the revolving of capital. Capital accumulates slowly in supply operations. Unless members contribute capital for supply operations, funds from marketing operations may be used.

3. Unsound expansion and credit and inventory management may jeopardize net margins of marketing operations. Too rapid and unsound expansion of supply operations resulting from overoptimism is a potential hazard. Large accounts receivable and slow moving inventories tie up capital and bad debts may cause loss of patronage in marketing as well as supply departments.

Suggestions for Successful Farm Supply Operations

On the basis of the findings in this study and the experience of Farmer Cooperative Service in conducting research and service work with associations throughout the United States, several suggestions for the successful handling of farm supplies by marketing cooperatives are presented for consideration. Many of these apply to the associations studied; the suggestions should also be of help to others interested in establishing or expanding farm supply services for their farmer members.

When management decides to proceed, after careful investigation of need and after obtaining member support, the following operating suggestions may be of value.

1. Start with basic supplies and services. Develop supply and service programs around one or more basic large-volume items such as feed, petroleum, or fertilizer. Once these initial programs are soundly established, important supply services in building, hardware, and automotive fields can be added. Appliances, farm machinery, and household items have not always been handled successfully along with farm supply lines.

2. Provide services that complement the supplies handled. For instance, if fertilizer is handled the cooperative could provide, at a price, delivery and spreading services in addition to supervising or making soil tests. If insecticides are handled, the cooperative could employ a specialist to observe infestations and recommend and supervise spraying or dusting operations. Perhaps this specialist could handle all field service work pertaining to all supplies.

3. Select capable employees, train them, and pay them on the basis of performance. Inform employees of responsibilities and use standards to measure their performance. Incentive bonuses based on commissions or quota goals have proven successful in encouraging employee efforts.

4. Provide satisfactory facilities. They should be modest, clean, conveniently located, and efficiently arranged.

5. Obtain adequate capital. Working capital requirements continue to increase as farmers buy more of their production inputs. Substantial member contributions to capital help establish farm supply services and assure continued patronage. Member equities should constitute two-thirds or more of total assets.

6. Departmentalize farm supply operations. As operations expand, give employees responsibility for specific supply areas. This leads to labor specialization and improved services. Records of departmental operations provide easier analysis by management as attention can be focused on separate supply areas.

7. Keep good accounting records. This is necessary for management to determine relative costs for handling various types of supplies to assure that patrons pay equitable prices. There is little justification for each major category of supplies to not carry its respective share of operating costs except in instances of initial introduction or when generally used by all patrons.

8. Price supplies at the going market level and refund net savings annually. Make price adjustments for volume, early delivery, and direct delivery purchases. Volume considerations help achieve services at cost and maintain and attract purchases of larger operators.

9. Manage inventories carefully. This relates to the activities of purchasing, storing, and distributing farm supplies.

a. Take advantage of preseason discounts in purchasing supplies.

b. Plan for volume discounts and savings in transportation by pooling orders with other associations.

c. Know your merchandise by maintaining adequate records and visual inspection. Keep posted on turnover to prevent out-of-stock conditions and to minimize the inventory of slow-moving items. Recognize the costs of interest, obsolescence, shrinkage, and insurance in carrying an inventory. Postseason discounts to move merchandise may be better than carrying to next season. Stocking new or specialty items should be based on patron requests or surveys.

10. Control credit extension and collection. This includes establishment of policy by directors, its acceptance by patrons, and enforcement by managers.

a. Be specific with patrons when extending credit.

b. Fully explain policy and terms to account holders.

c. Protect the interest of the association by use of notes, collection agencies, or legal procedures.

d. Consider credit as a service, set a price on it, and make a charge for its use or allow a cash discount.

e. Encourage and assist farmers to use existing credit agencies.

11. Develop strong merchandising programs. Develop programs to include display, advertising, delivery, and sales promotion techniques. Aggressive efforts in these areas build volume and reduce costs.

12. Use services of regional wholesale cooperatives. Channel purchases through a cooperative wholesale to build a strong supply line. In addition to providing quality products at reasonable prices, a strong wholesale can assist in merchandising displays and advertising programs; can provide technical product services, and can make savings possible at the wholesale level.

13. Keep abreast of technological changes and be among the first to provide needed services. Make farm contacts and patron surveys to determine needs of members. Maintain close affiliation with the State experiment stations and Extension Services, and develop ways of implementing their recommendations.

14. Inform the members. Promote member knowledge of cooperative principles and methods of operation. Keep them up to date on the business affairs of their association. Promote attendance and participation at annual meetings.

Farm Supply Operations of Cooperative Gins and Elevators in Texas

by

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Farmers today are spending an increasing proportion of their gross income for cash operating expenses. Costs of production have climbed because of new and increased technology and because of rising prices in the things that farmers buy. Farmers recognize that an important way to increase net income is to reduce operating costs.

Farmers in many areas of the United States have reduced operating costs by purchasing farm supplies cooperatively. Further savings have been effected by combining the many services of cooperatives into one organization. Examples are marketing cooperatives adding supply lines to their operations or supply cooperatives adding marketing functions.

By increasing the number of services performed, a much better utilization of manpower and fixed assets is possible. This combining of services is a form of economic integration being stressed at the present time.

Purpose and Method of Study

This study was undertaken to meet a request of the Extension Service of Texas A & M College, the Houston Bank for Cooperatives, and the Texas Federation of Cooperatives. They recognized that many cooperative gins and elevators provided minor or no farm supply services. They were interested in learning more about the operations of marketing associations that successfully handled farm supplies so that they might advise other cooperatives of the potential in this field.

The broad objective of the study was to provide data useful to cotton gin and

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Note: Appreciation is expressed to Clarence A. Moore, Associate Professor, Department of Agricultural Economics and Sociology, Texas A & M College, for assistance in planning and field work; to officials of the cooperatives that provided data; and to officials of the Houston Bank for Cooperatives for assistance in selecting cooperatives.

grain cooperatives now handling farm supplies or others interested in adding supply services. Special consideration was given to: (1) Advantages or disadvantages of providing supply services; (2) problems that might be encountered; (3) benefits to farmers; and (4) policies and methods that have provided efficient operations. The study did not attempt to determine why the cooperative purchasing of supplies has not developed in Texas to the extent that it has in many other States.

The Houston Bank for Cooperatives provided a list of cooperative gins and elevators in Texas. In cooperation with the Texas Extension Service personnel, 26 cooperatives presently handling farm supplies were selected for the study. To assure that operations and experiences would be significant, cooperatives selected had to have minimum farm supply sales of $50,000 a year. Eight of the association in this study marketed grain and 18 ginned cotton.

Personnel from the Department of Agricultural Economics and Sociology, Texas A & M College, assisted in the field work and completed the questionnaires for 13 of the associations.

Interviews with managers or other key personnel of the cooperatives provided operating data as well as views and experiences gained in performing various services. Data on operations were obtained for the latest fiscal year.

Development of Farm Supply Services

The supply operations of the cooperative gins and elevators participating in the study covered a wide range of services. They ranged from a single service, such as providing butane or fertilizer, to more complex operations, such as providing a complete line of farm supplies including groceries and hardware items. The accompanying tabulation indicates the categories of farm supplies provided by 20 of the cooperatives with a commodity breakdown.

Since some associations did not have a complete breakdown of the type of supplies handled, many carried a wider variety of items than indicated. Feed was the most common item they handled,

Type of supplies	Number of associations handling
Feed	12
Hardware and miscellaneous items	12
Fertilizer	11
Insecticides	9
Service station items	9
Butane	6
Liquid petroleum fuels (bulk plant and farm delivery)	5
Seed	5

followed by hardware and miscellaneous items, fertilizer, insecticides and service station items.

There was no clear pattern indicating that certain types of farm supplies were handled initially. Several associations were originally incorporated as farm supply cooperatives and later took on the function of ginning cotton or handling grain. Associations handling the largest variety of items were generally the ones that had begun as farm supply cooperatives.

Of the 26 associations, 7 began handling farm supplies before 1940; 9 started during the 1940's; and 9 others began handling farm supplies in the 1950's. One recently employed manager did not know the year in which his association began handling supplies.

Reasons for Adding Farm Supplies

Managers advanced several reasons as to why their associations had begun handling farm supplies. The most often mentioned was the desire to reduce costs of supplies for farmers. Next, was the goal of providing a specific new service or a better service. In four associations the managers stressed that the cooperatives initiated a supply service because the communities provided inadequate service or none. Two others hoped to reduce operating costs by providing for better utilization of labor. Other reasons mentioned were the need to maintain contacts with farmers and to increase elevator volume.

The responsibility for taking the initiative to handle farm supplies was attributed to patrons in nine associations; to managers in four associations; and to a combination of boards of directors and managers in six associations.

Problems Encountered

As a guide for managers and directors of cooperatives that decide to handle farm supplies, managers were asked to report some of the problems they encountered when they began their operations. Four managers considered credit their most pressing problem. The problem of obtaining capital for expansion was listed by two managers; two others thought the problem of source of supply was significant. Obtaining the patronage of members for maintenance of volume was considered a problem in two associations.

A problem reported by one manager was the competition resulting from a major oil company that furnished tanks to farmers who purchased gas from it. Other problems listed included competition in butane, the adequacy of labor in handling farm supplies, and the need for additional storage.

Managers' Suggestions

The wide range of suggestions managers made for establishing a farm supply service indicated varied experiences. For instance, one manager suggested that only a few lines be carried and a success made of them before adding more, while another said to add several at once to make possible a complete service. Two managers expressed the idea that the number of items should be somewhat restricted to assure volume and a real basis for handling them.

On the choice of supplies best suited for beginning a farm supply service, opinion generally depended on the locality and the broad needs of the patrons.

Most managers considered that feed, seed, fertilizer, and insecticides were the basic needs required by everyone and should be considered as good items for starters. Three managers mentioned fuel items because of their general use by farmers and because of the big volume attached to their distribution.

Three other managers considered that tires, batteries, and other accessories were desirable because all patrons used them at all seasons of the year. Only one manager mentioned hardware as an item for initiating a farm supply business.

Seven managers emphasized that a real need should exist and that they should make certain that the cooperatives could provide a service at a saving for the farmer. One emphasized the need for a manager to be enthusiastic about farm supplies before handling them -- that he should not have a defeatist outlook, -- but another emphasized that overoptimism might bring disappointment with initial results.

Four managers stressed factors relating to source of supplies. One was particularly emphatic in suggesting that the cooperative minimize the number of sources of supply. He stressed the time saved in not having a large number of salesmen call on him and also the advantage of one-stop shopping in purchasing supplies.

In connection with inventory matters, advice to watch buying closely, to beware of slow items, and to not overstock were also emphasized. Six managers mentioned the need for strict handling of credit. Four of them stressed the need to watch credit while two managers suggested that cash would be the best way to begin. Being prepared to give service for the items handled was stressed by one manager.

Operating Results

Data were collected from all the associations on sales, type of supplies handled, gross margins, expenses, net margins, accounts receivable, and inventory. The completeness of information varied by associations. For the most part, figures from about 20 associations were used for analysis.

Sales and Type of Supplies Handled

The type of supplies handled varied by associations, particularly between the major marketing activities. For instance, the elevator cooperatives generally handled a smaller line of supplies than the ginning associations. Total supply volume and the proportion of volume represented by type of supplies for 20 of the cooperatives are indicated in table 1. Sales in these 20 associations ranged from a low of $60,800 to a high of $448,152. Only three associations had sales in excess of $300,000 and four associations had volumes of less than $100,000. Average sales were $192,798 per association.

Feed was listed as a separate category in nine associations although three others handled it but reported it with some other items. Service station items were handled by nine associations. Fertilizer volume was reported separately by eight associations and three also reported fertilizer sales with insecticides.

For the associations that reported various commodity groups separately, petroleum and fertilizer represented the largest proportion of volume with an average of 43 and 37 percent of sales, respectively. Butane and insecticides were in second place with 32 percent of volume. In eight associations, one category of supplies represented more than 50 percent of total volume. In two of these associations one grouping represented the entire volume. These categories were not entirely accurate in that several items might have been handled but all carried under one listing. The high proportion of supplies reported under one category indicated a rather narrow range of services offered by some associations.

Table 1.—*Total farm supply sales and proportion of sales by type of supplies for 20 cooperative gins and elevators, Texas, 1959*

Association number	Retail sales	Type of supplies								
		Petroleum products	Butane	Fertilizer	Insecticides	Feed	Seed	Service station items	Hardware and miscellaneous	Total
	Dollars	*Percent of total volume*								
1	276,065	49	7	–	–	35	–	–	9	100
2	413,327	–	–	–	–	–	–	100	–	100
3	323,855	–	–	11	–	41	–	–	48	100
4	448,152	68	–	–	–	–	–	32	–	100
5	169,585	–	–	28	–	72[1]	[1]	–	–	100
7	269,034	–	–	91	–	–	–	–	9	100
8	231,576	–	–	75	–	12	–	–	13	100
9	165,253	36	46	–	–	–	–	11	7	100
10	126,347	–	–	15	4	20	18	11	32	100
11	174,385	–	16	–	–	–	–	84	–	100
13	106,441	–	–	–	40[2]	–	[2]	30	30	100
14	101,928	–	100	–	–	–	–	–	–	100
15	165,116	44	–	19	23	2[1]	[1]	4	8	100
17	90,728	–	–	53[3]	[3]	13	14	3	17	100
19	60,800	–	–	16[3]	[3]	78	4	–	2	100
21	79,059	–	–	28	41	31	–	–	–	100
23	67,557	–	–	–	52	27[1]	[1]	–	21	100
24	160,280	–	18	–	–	–	–	–	82[4]	100
25	209,631	20	7	38[3]	[3]	5	11	4	15	100
26	216,845	–	–	28	40	13	19	–	–	100
Avg.[5]	192,798	43	32	37	32	28	13	31	18	—
Association handling		5	6	8	5	9	5	9	12	20

[1] Consists of feed and seed.

[2] Consists of insecticides and seed.

[3] Consists of fertilizer and insecticides.

[4] No breakdown of sales given except for butane.

[5] Average of associations handling each item. Excludes data representing two or more items.

Cottonseed for planting is often handled as part of the gin operations so it is not considered as a farm supply operation in many associations. It is generally provided as a gin service at cost to patrons.

Gross Margins and Other Income

The 20 associations with some detail on type of supplies handled also had information on the gross margin realized for each type of supply. Butane carried the highest gross margin, averaging 36 percent of sales, in six associations that handled it (table 2). Service station and petroleum items were next with 17 percent gross margin for the associations that handled them. Insecticides were lowest with five associations reporting a gross margin of 10 percent.

Average gross margin for all the associations was 16.4 percent of sales (table 3). Average gross margin in two associations was less than 10 percent. In one of these, fertilizer and seed had been handled at about a 1 percent markup. One-fourth of the group had gross margins of 21 percent or more.

Other income averaged 0.9 percent of retail sales in 1959 (table 3). It ranged from 4.6 to -0.4 percent of sales among the group, but only six associations had more than 1 percent. In most cases this income came from nonoperating sources but in a few it consisted of receipts from feed grinding and mixing, service station work, delivery, and the like. The other income category also included some nonoperating expenses which in some associations were greater than nonoperating income.

Total Expenses

Expenses of handling farm supplies averaged 14.4 percent of sales for the 20 cooperatives (table 3). The range was from 6 percent to 29 percent of sales. One-fourth had expenses of 10 percent or less.

Expense items were arranged into five different groups that represented about 80 percent of total expenses for all the associations. The breakdown for 21 associations is indicated in table 4. Labor represented 55 percent of total expenses for all associations. Allocation of labor expenses was generally based on a time factor. For individual associations, labor represented from as little as 19 percent to as much as 92 percent of total expenses.

The expense items in many instances were estimates of managers and in other cases the estimates of auditors. Depreciation represented 8 percent of total expense as did equipment operation, including maintenance, repairs, and truck expenses. Utilities and taxes represented 6 percent and insurance 4 percent with all other expenses amounting to 19 percent of total expenses.

While there is not a precise method of determining what part of expenses is added cost related to farm supply operations, much of the labor and depreciation charged to farm supplies would be fixed costs for gins and elevators.

Net Margins

Net margins for 20 associations are indicated in the right hand column of table 3. Net margin is shown as percentage of sales and is the difference between expenses and gross margins plus other income, so that it is a net figure for all farm supply operations. The average was 3.3 percent of sales, ranging from a low of -0.6 percent to a high of 11.4 percent of each sales dollar.

Business success and efficiency are often measured by the ratio of net in-

Table 2.—*Gross margin by type of farm supplies for 20 cooperative gins and elevators, Texas, 1959*

Association number	Type of supplies								
	Petroleum	Butane	Fertilizer	Insecticides	Feed	Seed	Service station items	Hardware and miscellaneous	Total gross margin
	Gross margin as percent of sales								
1	11	41	–	–	12	–	–	8	13
2	–	–	–	–	–	–	24	–	24
3	–	–	27	–	18	–	–	13	16
4	22	–	–	–	–	–	19	–	21
5	–	–	8	–	15[1]	[1]	–	–	13
7	–	–	10	–	–	–	–	–7	9
8	–	–	23	–	18	–	–	2	20
9	14	43	–	–	–	–	21	28	27
10	–	–	1	9	5	1	6	13	6
11	–	44	–	–	–	–	21	–	25
13	–	–	–	3[2]	–	[2]	25	25	12
14	–	40	–	–	–	–	–	–	40
15	20	–	3	12	19[1]	[1]	10	20	14
17	–	–	6[3]	[3]	10	10	15	30	11
19	–	–	8[3]	[3]	23	35	–	–18	20
21	–	–	11	6	9	–	–	–	8
23	–	–	–	13	18[1]	[1]	–	14	14
24	–	34[4]	–	–	–	–	–	–	10
25	19	17	6[3]	[3]	12	6	15	19	15
26	–	–	5	11	14	13	–	14	10
Average[5]	17	36	11	10	13	13	17	12	16
Associations handling	5	6	8	5	9	5	9	13	20

[1] Consists of feed and seed.

[2] Consists of insecticides and seed.

[3] Consists of fertilizer and insecticides.

[4] No breakdown of sales given except for butane.

[5] Average of associations handling each item.

come to sales. However, this figure alone is not entirely a reliable indicator. Gross margins and expenses need to be considered. In table 5 gross margins, expenses, and net margins as a percentage of total sales have been arrayed on the basis of gross margins. Twenty associations are included in this array. The data indicate that the associations with the highest average gross margin also had the highest average expense ratio and the highest average net margin per sales dollar. Likewise, the associations with the lowest average gross margin had the lowest average expense and net margin ratios.

The seven associations with the highest gross margins, averaging 25 percent, had expenses of 20 percent and net margins of 6 percent.

Another seven associations had average gross margins of 14 percent, expenses of 12 percent, and net margins of 3 percent.

The six associations with the lowest average gross margin of 10 percent had expenses and net margins of 10 and 1 percent, respectively. In each of the three groups, nonoperating income amounted to about 1 percent of sales.

Management may endeavor to assure some net margin by making certain that

Table 3.—*Selected data on farm supply operations of 20 cooperative gins and elevators, Texas, 1959*

Association number	Gross margin	Total expenses	Net operating margin	Other income[1]	Total net margin
			Percent of sales		
1	13	10	3	2.2	5.2
2	24	19	5	0.6	5.6
3	16	16	0	1.4	1.4
4	21	16	5	0.8	5.8
5	13	9	4	0.2	4.2
7	9	9	0	0.3	0.3
8	20	12	8	−0.1	7.9
9	27	20	7	2.4	9.4
10	6	11	−5	4.6	−0.4
11	25	24	1	−0.2	0.8
12	15	11	4	−0.3	3.7
13	12	12	0	0.0	0.0
14	40	29	11	0.4	11.4
15	14	13	1	1.7	2.7
17	11	15	−4	4.4	0.4
19	20	20	0	0.0	0
23	14	15	−1	0.4	−0.6
24	10	8	2	−0.3	1.7
25	15	13	2	0.6	2.6
26	10	6	4	−0.4	3.6
Average	16.8	14.4	2.4	0.9	3.3

[1] Includes both nonoperating income and expense.

Table 4.—*Types of expenses as a proportion of total farm supply expenses in 21 gin and elevator associations, Texas, 1959-60*

Association number	Types of expenses						
	Labor	Depreciation	Equipment operations[1]	Utilities and taxes	Insurance	Other	Total
	Percent of total expenses						
1	33	7	9	7	7	37	100
2	65	6	8	2	4	15	100
3	19	13	33	6	3	26	100
4	61	12	16	3	1	7	100
5	34	10	3	3	4	46	100
6	68	7	4	5	1	15	100
7	42	9	2	4	6	37	100
8	43	2	1	1	[2]	53	100
9	51	10	10	11	4	14	100
10	55	9	1	5	3	27	100
11	60	8	4	6	3	19	100
12	75	11	2	2	2	8	100
13	56	3	2	4	2	33	100
15	63	4	6	6	4	17	100
17	63	4	1	11	9	12	100
18	25	5	54	4	9	3	100
19	60	15	2	17	4	2	100
22	75	6	2	13	4	[2]	100
23	92	1	1	2	4	[2]	100
25	65	8	8	5	3	11	100
26	50	11	12	8	5	14	100
Average of percents	55	8	8	6	4	19	100

[1] Includes maintenance, repair, and truck expense.

[2] Less than 0.5 of 1 percent.

gross margin adequately covers expenses. But patrons would realize no real benefits by paying a high gross margin in exchange for a high patronage refund. However, the type of supplies handled and extent of services performed by a cooperative would vary the ratios and make comparisons difficult.

Table 5.—*Relationship of expenses and net margins to gross margins on farms supplies for 20 cooperative gins and elevators in Texas, 1959*

Association number	Gross margin	Expenses	Net margin[1]
		Percent of sales	
14	40	29	11.4
9	27	20	9.4
11	25	24	0.8
2	24	19	5.6
4	21	16	5.8
8	20	12	7.9
19	20	20	0
Average	25	20	6
3	16	16	1.4
25	15	13	2.6
12	15	11	3.7
15	14	13	2.7
23	14	15	– 0.6
1	13	10	5.2
5	13	9	4.2
Average	14	12	3
13	12	12	0
17	11	15	0.4
24	10	8	1.7
26	10	6	3.6
7	9	9	0
10	6	11	– 0.4
Average	10	10	1
Average – all associations	16.8	14.4	3.3

[1] Includes nonoperating income.

Accounts Receivable

Most managers of retail establishments handling farm supplies recognize that extension of credit to purchasers is a common practice. However, extension of credit often becomes a problem because of the funds required and the costs of handling credit.

Data were obtained in this study to determine the part played by credit in farm supply activities. While three associations extended little or no credit, the remaining ones estimated that credit was extended for up to 75 percent of total sales.

The amounts of credit outstanding at year-end varied among associations from a low of $6,562 to a high of $101,115, with an average of $37,044 (table 6). In terms of percent of sales, the range in accounts receivable was from 4 percent to 39 percent, with an average of 17 percent.

Another way of expressing the size of accounts receivable is in days' sales. Sales per day are determined by dividing yearly sales by 300, commonly accepted as the number of selling days in a year. Sales per day can then be divided into accounts receivable to arrive at the number of days' sales in the accounts.

In these associations, accounts receivable represented as little as 11 days' sales and as high as 117, but averaged 52 days of total sales or about 68 days of credit sales. By way of comparison, Farmer Cooperative Service studies of 93 associations in various sections of the country showed they averaged about 17 days of total sales in year-end accounts receivable in recent years.

The association in Texas with relatively high accounts receivable ended its fiscal year at a season of high sales when accounts receivable were generally at the highest level. In making comparisons of year-end figures, consideration should be given to closing dates because of the effect of seasonal volume. A better comparison of size of accounts receivable as a percent of sales can be obtained by using average monthly totals but this information was not available.

Managers were asked to estimate the high and low amounts of accounts receivable during their last fiscal year. For 17 associations, the average peak volume was close to $50,000 and their low was $20,000 compared to their year-end amount of $37,044. These estimates emphasize the amounts of capital required to carry accounts receivable in a farm supply operation.

While considering the capital used in accounts receivable financing, attention might well be directed to the costs associated with carrying receivables. Credit costs include: (1) Interest on money tied up in accounts; (2) labor in extending, bookkeeping, and collecting; (3) cost of forms, books, and other supplies; and (4) losses on uncollected accounts.

In studies made by Farmer Cooperative Service, estimated costs of credit were about $2 for each $100 of credit sales; or expressed another way, at around 15 percent of average accounts receivable. Interest expense accounted for more than a third of total costs, followed by bookkeeping representing about 30 percent. Bad debts, often considered the major cost of credit, represented only 6 percent of total costs.[1]

Inventories

Inventory figures were reported on balance sheets of the associations studied, but these entries seldom made a distinction between marketing and farm supply items. For inventory figures on only farm supplies, data were taken from either trading or operating statements in 13 associations (table 7). The average dollar volume of inventories in these associations was about $30,500.

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[1] Bailey, John M. Credit Control in Selected Retail Farm Supply Cooperatives, Area VI – New York, New Jersey, Virginia, West Virginia, North Carolina, and Georgia. Farmer Cooperative Service, U. S. Dept. of Agr. Gen. Rpt. 71. 1960.

Table 6.—*Selected accounts receivable data for 18 cooperative gins and elevators handling farm supplies in Texas, 1959-60*

Association number	Accounts receivable						
	Year end			High month		Low month	
	Amount	Percent of sales	Days of sales	Amount	Month	Amount	Month
1	$ 47,966	17	52	$ 56,071	June	$30,441	April
2	101,115	24	73	101,000	May	64,000	Jan.
3	47,059	15	44	58,191	Sept.	36,841	Jan.
4	62,257	14	42	90,000	June	25,000	April
5	65,951	39	117	91,616	June	37,076	Jan.
6	16,749	10	19	26,000	Dec. & Apr.	15,000	Jan.
7	38,917	14	43	60,000	May	6,700	Feb.
8	39,687	17	51	64,000	July	5,000	Feb.
9	26,469	16	48	28,000	May-June	18,000	Oct.
10	6,562	5	16	40,000	Oct.	6,500	March
11	28,574	16	49	28,000	Aug.	18,000	Feb.
13	18,543	17	52	40,000	May-June	10,000	March
15	23,660	14	43	41,091	July	17,581	Dec.
16	40,922	22	67	[1]	[1]	[1]	[1]
17	9,345	10	31	10,000	June	5,000	Sept.
20	11,745	25	77	11,745	May	2,470	Jan.
25	7,614	4	11	7,614	Feb.	19,352	July
26	73,651	34	102	73,650	Oct.	15,280	Feb.
Average	37,044	17	52	48,646		19,544	

[1] Data not available.

A measure used to judge inventory management is the number of times inventory is turned in a year. When turnover is 12 times a year, stock is turned once a month. A high turnover gives better efficiency in use of capital and storage space. It also minimizes the danger of stock losses through deterioration and obsolescence. However, too high a turnover may lead to out-of-stock conditions and poor service to patrons.

Turnover is usually determined by dividing average monthly inventories into cost of goods sold. The use of average inventories eliminates seasonal and monthly fluctuations that might make year-end figures unrepresentative. Using costs of sales does away with distortion of varying gross margins.

In this study figures were not available on average inventories so year-end inventories were divided into total sales. This procedure may make comparisons with other standards less precise but it affords comparisons among associations in this group.

The average turnover in the 13 associations was 8.5 times, varying among individual associations from a low of 4 to a high of 17 times a year (table 7). The associations with the highest turnovers had a high proportion of sales of typically high-turnover items like fertilizer, insecticides, and feed. However, the sales of most associations in this study were made up generally of high turnover items, thus indicating considerable room for improvement in many associations.

For purposes of comparison, inventory studies made by Farmer Cooperative Service indicated the following standards for turnovers of farm supplies: Feed 19 times a year, seed 9, fertilizer 20, and petroleum 26 times. Building supplies, hardware, and automotive accessory items had average turns of less than five times a year.

The cost of carrying inventories has been estimated at 10 percent of value. Interest on inventory capital represented about one-half the total cost. The 13 associations had average year-end inventories of $30,471. In addition to these inventories, the same 13 associations had about $37,000 of what might be counted as "inventory claims" in the hands of patrons. This amount was the average of the accounts receivable held by these associations. To be owed at year-end for more merchandise than was in stock could be cause for concern.

Table 7.—*Inventory data for 13 gin and elevator associations handling farm supplies in Texas, 1959-60*

Association number	Year-end inventory	Inventory turnover
		Times per year
1	$27,843	10
2	80,798	5
3	52,483	6
4	50,686	9
5	29,312	6
6	19,604	8
8	14,459	16
9	9,691	17
10	25,450	5
12	16,833	4
17	19,920	5
21	5,294	15
25	43,759	5
Average	30,471	8.5

Capital Requirements

Data on total capital requirements for farm supply operations of the gins and elevators in this study were not available. The principal reason for this was the practice of making a single balance sheet to cover both marketing and supply entries. However, information was available on capital uses in some fields.

The average amount of capital in year-end supply inventories was known because figures were taken from trading statements. The reported amount of accounts receivable at year-end may include some marketing accounts such as harvesting advances, but for the most part the figure reflects capital tied to supply operations.

Managers were asked to estimate the depreciated current value of buildings and equipment used in farm supply services. The wide range, from a low of just over $600 to a high of about $80,000, indicated the diversity of different facilities and operations. One association might provide only a liquid fertilizer service requiring a few storage tanks while another might have a complete farm supply facility including a service station. The average depreciated value of buildings and equipment in 21 associations was $15,288.

Capital needs in three important areas of farm supply operations are shown in the accompanying tabulation.

The capital required for facilities, inventories, and accounts receivable thus averaged about $79,400. Additional capital would be needed for cash to carry on daily operations, and consideration also should be given to investments in a wholesale cooperative. Total capital required for a farm supply operation like the average of those in this study, therefore, could approach $100,000.

Kinds of capital use	Number of associations reporting	Average capital required
Buildings and equipment	21	$15,288
Accounts receivable	18	37,044
Inventory	15	27,069
Total	—	$79,401

Operating Facilities, Policies, and Practices

The operations of the associations in this study were similar in many respects. Details are described in the following pages.

Farm Supply Facilities

Metal buildings were the predominant type used by most of the associations. Some had cinder block and brick structures and two used quonset-type structures. Size of buildings for warehousing farm supplies ranged from as little as 500 square feet to around 12,000 square feet, with the majority about 5,000 square feet.

Storage tanks for gasoline, fuel oil, butane, and anhydrous ammonia varied in size from 1,000 gallons up to 20,000 gallons, with the number of tanks for individual associations depending upon volume. One association was able to reduce its expenditures for liquid fertilizer tanks by leasing two rail cars for seasonal storage.

When farm supplies were first added, eight managers indicated that separate facilities were needed and three managers said no separate or additional facilities were required except for the office. Existing facilities were used to good advantage in 14 associations.

At the time of the study, most managers believed their facilities were adequate. One manager stressed he had plenty of space but needed a better arrangement of facilities. Another reported adequate space but that arrangements were inconvenient. Four managers mentioned need for additional storage space; three saw the need for improved display areas; and one needed facilities for servicing tires.

Purchasing Practices

Managers did the purchasing in 10 associations and shared purchasing responsibilities with department heads in 6 associations. Department heads in five associations were solely responsible for purchasing; in another five associations they arranged the orders for supplies and had them approved by the managers. In one association the assistant manager did the ordering.

Several practices reduced the cost of merchandise or reduced the amount of capital required to maintain inventory. Five associations made carload purchases for such items as feed, fertilizer, and oils and greases. Fifteen associations used consignments for one or more of the following items: Fertilizer, seed, and insecticides. Six associations used pooling for the following categories of supplies: Feed, seed, hardware, tires, batteries and accessories, and grease.

Other procurement methods to achieve lower cost or less capital included contracting with a supplier of protein cubes, hauling feed in association-owned trucks, purchasing items in off-season at discounts, bargaining with wholesaler at time of purchase, and purchasing miscellaneous items on patron orders.

Two managers stressed the financial importance of taking advantage of all purchase discounts. One manager figured that the purchase discounts taken by his association paid one-half of his salary. No one technique in purchasing was reported as most satisfactory, although pooling and consignment were specifically mentioned as satisfactory methods.

Seven managers reported purchasing all of their items, with minor exceptions, through wholesale cooperative channels. Tires, batteries and accessories (TBA items) were the items most generally purchased in total from cooperative channels. Next in importance were feed, petroleum, and fertilizer, followed by insecticides or poisons and seed. Hardware items were the principal types purchased from cooperatives in small proportions.

Inventory Management

The most important factor determining the amount of normal inventory was the aim to have enough but not too much of an item on hand -- referred to as the minimum-maximum principle. Seven associations indicated that available storage space restricted average inventory size for liquid petroleum, butane, seed, and fertilizer. Two listed available capital and two reported transportation facilities as limiting factors in determining their amount of inventory.

The cooperatives used a variety of combinations of timing in taking inventories. Thirteen counted the bulk of items only once a year, while 9 associations took monthly inventories. Three took quarterly inventories, and two reported semiannual inventories.

The associations taking monthly inventories generally consigned the items and found monthly inventories necessary to make proper accounting and payment to the consignor. Two associations took weekly inventories on feed while another maintained perpetual inventory cards. The latter carried a minimum variety of items in stock.

Inventories were generally priced at cost although four managers indicated that their inventories were priced at cost or according to the market, whichever was lower. Eight associations made duplicate copies of inventory reports.

Distribution

Areas serviced by the associations in this study were generally quite localized. Service areas were community rather than county-based and served farmers as much as 25 miles distant. None of the associations had branches.

One association operated two service stations while another had its anhydrous ammonia stored at two different locations to better serve farmers. A gin cooperative maintained a supply of insecticides at airports to facilitate air application for its members.

Eleven associations made no deliveries to farmers. In the other cooperatives, delivery of feed, liquid petroleum items, and butane varied from as little as 20 percent to as much as 100 percent. No feed was handled in bulk.

Merchandising Methods

Managers were asked to indicate the relative importance of various selling or delivery methods they had used in the last 2 years. The methods for which managers seemed to show the most enthusiasm were personal contacts, increased advertising, and special sales days. Increased sales efforts were mentioned by five managers and their programs included both advertising and personal contacts.

Three managers mentioned special sales. One association had a special sale in the morning of the annual meeting day. The local school assisted and drawings were held to make the sale a community affair. The manager was particularly enthusiastic about its success. He reported that it had become recognized as an annual affair and did much to bring members out to the annual meeting.

Early delivery and preseason sale techniques were used by two associations to push sales of seeds and oil and grease items. One association stimulated sales efforts by providing a bonus to employees of 3 percent of net margins over $30,000.

Three associations gave quantity discounts on feed and fertilizer. These discounts ranged from $2 to $3 a ton on feed and $3 a ton for fertilizer, provided a truckload was taken.

Eight managers reported no special merchandising programs. Some of these associations were isolated and were the only sources of supply in the community. Comments of two managers, however, are of interest: "None of the possible methods listed would have increased sales"; and "Our association makes no push on farm supplies."

Advertising Practices

All but eight of the associations practiced some form of advertising to bolster

Medium of advertising	Regularity of use		
	Seasonal	Monthly	Weekly
	Number of associations		
Radio	5	1	–
Newspaper	9	1	6
TV spots	5	–	–
Mail outs	8	–	–
Store displays	2	–	–

volume. Managers were asked about the regularity of use of certain advertising mediums. Their answers are shown in the accompanying tabulation.

Five associations made seasonal use of radio. Two associations, not shown in the tabulation, reported the use of daily radio spots in their advertising programs. Newspapers were used most -- seasonally by nine associations, monthly by one, and weekly by six. Mail outs were used seasonally in eight associations and TV spots were used on a seasonal basis by five.

Many associations had a pot of hot coffee available at all times to which patrons were welcome to help themselves. The technique was probably typical of the area. While it was a common practice, one manager specifically mentioned it as a very effective means for creating good will and bringing in patrons.

Pricing Practices

Managers were asked to describe the factors that helped determine their pricing policies. There seemed to be no specific pricing factor that related to commodities. In some localities, one type of pricing was important for a commodity but in another locality the same type had no apparent effect.

Eleven managers considered that both competition and established margins were equally important in influencing price. Eight other managers thought the market or competitive influence was entirely the factor responsible for the pricing of their products. However, seven of these managers followed suggested wholesale price policies or operated on their established margins.

Several associations had volume discount programs in their pricing structure. One association distributing petroleum products by tank truck and also operating a gasoline service station gave one-half cent off for each gallon purchased at the station. Fertilizer discounts were given in three associations when amounts of from 5 to 10 tons or a truckload were taken.

Volume discounts on feed were often allowed. As mentioned, discounts varied from $2 to $3 a ton on truckload lots. One association, charging a $6 a ton markup on less than 1-ton purchases and a $4 a ton markup on feed taken out of warehouses, allowed $2 a ton discount on loads direct from mill to farm.

Managers were asked about commodities that presented special sales or pricing problems. In response, two managers mentioned feed. One believed it was hard to hold volume because of established brands or trademarks and that farmers using large amounts of feed were building their own mills. A low margin on feed was reported to be a problem by the other manager.

Two managers indicated that miscellaneous supplies and hardware presented pricing problems. One stated that the wide disparity of prices charged in the area, compared with suggested retail prices, made it difficult to know exactly what price tag to use on many items. The other manager indicated that hardware was a difficult item to handle because of many rapid changes taking place in the field such as the availability of many new items and the increasing chance for obsolescence.

Credit Policies and Practices

Numerous studies indicate that the success of a credit program is quite closely correlated to the policies governing the use of credit. A loose or no-policy program often leads to serious credit difficulties, while a well planned, understood, and accepted policy contributes to satisfactory operations.

Credit Policies

Managers of 17 associations gave boards of directors full credit for establishing credit policies. At the other extreme, managers in four associations said they were responsible for establishing the policies. In three associations, managers felt that both the manager and the board had been jointly responsible for the policy.

One association did not have a set credit policy. Three had a cash policy and were able to adhere to it quite closely. In 18 associations the policy was described as a straight 30-day one, but this had some exceptions. One association allowed 30 days on everything except fertilizer. Payment for it was expected in 10 days. Another allowed 30 days or a maximum of $100. Another had 30 days as its policy, but a patron could go up to a year or to the extent of capital stock he owned.

Exceptions were generally granted just before harvest season because of the weak financial condition of farmers. In one association the practice was to give credit for a full season rather than 30 days as stated in the policy. Another varied the policy according to commodity. There was a greater exception for patrons than for commodities in one association.

Three associations used a combination of discounts if cash was paid at a certain time. In another, cash was to be paid in 30 days for all except seed purchases; they would be carried until harvest season with no interest. Another association with a cash policy expected cash for everything except butane for which 30 days were allowed because of competitive conditions. Although not a policy stipulation, one manager attempted to limit individual credit amounts to about 50 percent of the patron's capital stock equities.

Managers expressed very little dissatisfaction with their present credit policies. However, they thought certain elements of the policies or practices could be improved. For instance, one thought terms should be more strict and efforts at collections should be more determined. One manager said the stiffer the credit policy, the better.

Managers were asked to comment on the changes made in credit policies within the last 5 years for their respective associations. Two with cash policies for the last 2 years expressed satisfaction with the program. The other manager whose association went on cash in January 1960 could see no change in volume but had lost the patronage of some persons classified as "bad accounts." He believed there was a net gain by the change in policy.

Another manager said in the last 5 years there had been stricter control on credit in his association with no reduction in sales. An association handling butane formerly carried all accounts until fall but now functions under a 30-day policy with payment due the 10th of each month.

Credit Practices

Managers were responsible in 19 of the associations for determining if credit was to be granted individual patrons. In one association the board members made the determination before any credit was granted. In two other associations a department head and the store manager had the responsibility for determining who should receive credit.

Managers believed that they made their credit policies generally known to the patrons. This was accomplished in the case of 17 managers by oral statements. Written statements were used by six managers while publications and posters were used by three managers. Annual meetings or stockholder meetings were the means of announcing and explaining credit programs at four associations.

An oral statement of income and expenses was the most popular type of investigation made at the time of credit determination. Twelve managers relied upon this method while only 3 utilized the services of credit bureaus. One manager used a combination of methods but followed no set pattern; the method was determined by the amount of credit involved. Another manager, while relying on the rating of the credit bureau, still made his own check to determine the reliability of the credit rating.

Those managers not listing any particular method stressed that they knew the farmers in their area and could depend upon this personal knowledge. Another manager limited credit to only those who used the ginning service.

Use of Notes -- About half the associations in this study converted old open accounts to notes. Four associations converted the accounts to notes only as a last resort, while three used notes when the accounts became doubtful in the mind of the manager. One association regularly used notes and two other associations used them on past due accounts. The other managers using notes made no particular distinction as to when they would be used in lieu of open accounts.

The rate of interest charged on notes generally was 6 percent a year. Three associations charged 8 percent and one association charged 10 percent interest. The term of the notes with respect to time varied from demand, to harvest, to 6 months, up to a year, with no set time of payment.

Notes were all held by the associations in lieu of discounting them for immediate cash. The number of notes made within the last fiscal year ranged from two to six for each association, with the volume of dollars varying from $150 to $4,000 for individual associations. Only 11 associations reported any notes outstanding at the time of the study.

Credit Review by Board -- Only two of the associations handling credit did not have their credit situation reviewed by their boards of directors. The boards of 15 associations made such a review monthly, and those in two associations had reviewed credit practices once within the preceding 6 months.

The review process followed by board members varied considerably. Some associations reviewed the credit situation along with the operating statement; other boards had lists of accounts prepared at monthly intervals. Some merely checked the total volume of dollars concerned with credit. One manager said his board spent very little time in review although it did review the credit situation monthly. Another manager made a partial aging monthly and a complete aging yearly for board reviews. A detailed list of all patrons using credit with the amounts outstanding was presented each month to the board in one association.

Allocation of Costs -- Ten associations made efforts to charge for credit or to give some consideration for cash. Cash discounts offered ranged from 2 percent to as much as 10 percent. For butane, one association gave one-half cent off if the bill was paid by the 10th of the month. Another made the same discount if the butane bill was paid within 10 days of date of purchase. Two associations offering discounts for cash also followed the regulation that no credit would be extended after 30 days. In one association with a 30-day credit policy, the manager did not give a discount for cash, but insisted that sales would not be made as long as a bill was outstanding for more than 30 days. Only one association charged interest on unpaid accounts and this charge was 10 percent.

Commodities with Credit Problems

Insecticides presented the most credit problems to managers -- six listing them as their most serious item. They said insecticides were used in the season when farmers were low on cash; insecticides were expensive; and that the custom was to carry cotton farmers for such expenses until they harvested their crop.

Fuel items including butane, petroleum, and fuel oil were listed by four managers as causing credit problems. Winter heating and major company practices of providing seasonal credit were the principal reasons why fuel products caused credit difficulties. Two managers said that differences in patrons were responsible for more credit problems than differences in commodities. Another manager said that dairy farmers as a group seemed most likely to have credit problems.

The credit practices of cooperatives for various communities apparently were not different from those of other types of businesses. One manager thought the cooperative was probably more liberal than other suppliers. Another made no interest charge but stated that another firm handling the same type of supplies charged 10 percent on past due accounts.

Services Related to Supplies

The cooperatives studied provided rather limited services for the commodities they handled. Four associations rented fertilizer equipment to farmers so they could make the application on their own farms. One association made the application itself, while at another a fertilizer spreader was provided at no cost to patrons. Another association made arrangements with a private operator to apply the fertilizer the association sold to patrons.

The principal reasons given for providing patron services were: (1) To meet member requests; (2) to increase volume; (3) to provide a more complete retail service; (4) to furnish a more convenient type of service to farmers; and (5) to encourage farmers to patronize the co-op for all their needs.

Most of the managers believed the services they provided had some effect on the business activities of the cooperative. The most common effect was an increase in volume of marketing, whether in grain or in ginning. One manager considered that renting fertilizer equipment helped increase fertilizer sales in the association he managed. Another said services helped both grain and gin volume because contacts were maintained with farmers throughout the year.

Only three associations had plans for adding more services within the next year. These included tire mounting equipment, feed milling, distributing of liquid fertilizer, and establishing custom feed mixing and grinding. All of these services were to be added by cooperatives operating principally in grain marketing. Managers of cotton gins expressed no intentions of increasing their services in the next year.

As to services that managers thought should be added at a later date, feedlots were mentioned several times in the grain areas. The manager at a grain elevator reported a complete farm store would be desirable while another was considering adding a feed mill. Three gin managers thought their associations should build grain elevators.

Membership and Patronage

Records on membership and patronage were obtained from 21 managers. Eight associations were engaged in grain marketing and 13 principally in cotton ginning. The accompanying tabulation provides information on member and patron numbers.

Associations engaged primarily in marketing averaged 560 members, while those ginning cotton averaged 295 members. Fifty-eight percent of all members in the elevator associations marketed grain; 61 percent of all members in gin associations had cotton ginned.

In grain elevators, 66 percent of the members purchased farm supplies; in cotton gins, 72 percent. These percentages are based on the assumption that all patrons were members which is not entirely correct because some associations listed more patrons of farm supply services than they had members. In both grain and cotton operations, more patrons used farm supply services than either gin or elevator services. This would support the thought that a farm supply service offers a potential for contacting more farmers and thus helps to increase volume of marketing operations.

Major Problems in Farm Supply Operations

Managers were asked to list major problems that confronted them in conducting a farm supply operation. This information might be helpful to those who are planning to handle farm supplies and perhaps to those who are considering expanding their present farm supply operations. The problems fell generally in two broad categories: Those relating to inventory matters and to finance.

A problem in inventory was to arrive at the proper size, especially for miscellaneous items. A satisfactory source

Principal type of association	Number of associations	Average number of members	Average number of patrons, by type of services		
			Cotton	*Grain*	*Farm supply*
Elevator	8	560	–	325	368
Gin	13	295	179	–	212

of supply was a problem at one association. One manager complained that he had difficulty in getting supplies when needed. The association that operated a repair service found its biggest problem was maintaining parts without getting overstocked.

In the financial or credit area, two managers stressed that credit problems were the major ones encountered in providing supply services. In another field, one manager was having difficulty in getting his patrons to accept a "full-tank" program of petroleum distribution. The manager expected to cover an area at regular intervals with stops at each farm to fill the fuel tanks, thus eliminating call-backs over the same territory.

One manager considered insecticides presented a problem, since to really do a good job of supplying and servicing the farmers' needs, an entomologist would need to be engaged during the dusting season. Because considerable volume would be necessary to justify hiring an entomologist, several managers were considering jointly employing one.

Effects of Handling Farm Supply Services

Management, including directors and managers, should carefully assess the advantages and disadvantages as well as problems associated with handling farm supplies before they make a final decision.

In making an assessment of advantages and disadvantages, one should recognize that experiences and opinions of managers reflected differences in operations and in managements' interests and capabilities; and also that limitations in accounting records and other circumstances might influence the objectivity of managers' appraisals.

Advantages

Managers were asked to enumerate some of the advantages afforded gin and elevator marketing operations by adding farm supply services. The benefits mentioned are shown in the accompanying tabulation:

Benefits	Number of reporting managers
Makes better use of labor	9
Builds volume	6
Holds patronage	6
Lowers overhead	5
Permits better use of equipment	2
Assists with credit control	2
Provides more complete service for patrons	2
Maintains director interest	1
Increases savings	1
Provides better products to patrons	1

Employee	Time spent			Salary	
	Number of associations reporting	Number of employees	Percent of time spent on farm supplies	Number of associations reporting	Average annual salary
Manager	20	20	42	10	$6,210
Clerks	11	21	62	16	3,800
Bookkeepers	10	12	48	5	4,220
Others	9	17	45	12	3,340

This listing illustrates a wide variety of benefits. The advantage most often mentioned was better use of labor. Nine managers thought this resulted from combined operations. Efficient use of labor was followed by "builds volume" and "holds patronage," each being mentioned by six managers. Several managers listed more than one benefit.

Managers of seven associations believed that farm supply activities offered no particular advantages to gin and elevator marketing operations. One manager thought gin operations probably contributed more to farm supply activities than farm supplies helped gin operations. However, he believed a combination of services was advantageous to farmers.

How might the validity of managers' opinions as to the advantages of combining farm supplies and marketing operations be tested? With respect to better utilization of labor, an analysis of estimated time of various employees charged to farm supply activities and salary levels of such employees are indicated in the accompanying tabulation.

In 20 associations, managers estimated that about 42 percent of their time was occupied with farm supplies. Eleven associations with a total of 21 clerks, about 2 for each association, estimated about 62 percent of clerking time was spent on farm supplies.

Bookkeepers in 10 associations averaged 48 percent of their time on farm supplies.

In addition to shared employees, 10 associations had a total of 18 clerks employed full time on farm supplies. Nine associations had a total of 13 other employees who worked full time on farm supplies.

The advantages attached to shared labor can be partly measured by considering labor costs. Assuming that a majority of, if not all, shared labor would be needed in marketing operations, then any labor utilized in farm supplies would have the effect of lowering costs in marketing. Using the average salary figures shown in the previous table, the value of shared labor can be determined. Based on averages of shared time and salaries, farm supplies' share of a manager's salary would be $2,608 (42 percent of $6,210). For each shared clerk, farm supplies would carry $2,356 (62 percent of $3,800). Likewise bookkeeper labor carried by farm supplies would amount to $2,026 (48 percent of $4,220). For each other employee, farm supplies would bear $1,503 (45 percent of $3,340).

An association sharing the time of an employee in each of the four categories would carry a labor cost of $8,493 for farm supplies and $9,077 for marketing operations. It makes little difference to a patron whether or not these shared costs are actually shown on separate operating statements. If farm supplies are handled at cost with no charge made to farmers, the service cost is included in the gin and elevator margin but farmers are still the beneficiaries.

This study and other research indicate that combining supply and marketing functions offers other advantages. Costs can be reduced by spreading the fixed costs of facilities and equipment. Patrons pay two constant costs on facility capital--depreciation and interest. These costs are less burdensome if spread beyond marketing to include farm supplies and services. Office and warehouse space with respective equipment can be used in both marketing and purchasing operations to reduce unit costs. To the extent that these facilities are only partially used during the year, their costs rest more heavily on a limited volume.

Including farm supply and other services may increase marketing volume. Many patrons drawn in by the new services also become marketing patrons. In a report by Ohio State University, MM173, "How to Build a Better Business at Country Elevators," Ross Milner suggests that elevators providing services like grinding, mixing, storing, and trucking may stimulate additional sales and increase total net income, if the services provide an opportunity to use the labor force and facilities more efficiently.

By purchasing through cooperative wholesale and manufacturing organizations, associations can achieve savings on supplies needed by farmers. In many areas, regional cooperatives return wholesale patronage savings to local associations that are greater than the savings from the local retail operations.

Through cooperative control and quality programs, associations can provide better services to farmers. The benefits occur particularly with seed, fertilizer, and feed items where farmers own and direct procurement and production activities.

Disadvantages

Managers of three associations pointed out some disadvantages of combining farm supplies with marketing functions. One thought that there was some inefficiency in use of labor by spreading personnel over two different types of operations.

For instance, an effective gin hand may not be able to adapt to retail supply operations. He has obtained his experience by working with machinery rather than with feed and petroleum products. Then, again, ability to sell and to meet patrons may be of little use in ginning.

Another manager pointed out that considerable capital was required to finance credit and inventory activities and thus return of marketing margins to farmers might be slowed. However, he recognized that this would only be true until farm supply activities had reached a sufficient volume to provide their own financing from net margins.

Too rapid and unsound expansion of supply operations resulting from inexperience and overoptimism is a potential hazard. Weak credit and inventory management may tie up needed capital in accounts receivable and slow-moving stocks of supplies. Losses from bad debts may occur and cause ill feeling and loss of patronage in marketing as well as supply departments.

Plans for the Future

Responses of managers to the question of what new supplies they intended to add within the next year were limited. Only two expected to add new supplies or services -- one to improve its elevator, the other to add hardware. Three believed that distribution of fertilizers and butane would be feasible, but had developed no plans to include those supplies.

Associations with future plans in the farm supply field might be guided by the figures in table 8. They indicate the volume of important farm expenditures for supplies in Texas for 1958-59, and the proportion purchased cooperatively.

The proportion of the selected items distributed by farmer cooperatives in Texas was 5.3 percent. The national average share of these supplies purchased cooperatively was about 21 percent.

Average purchases of all farm production supplies and equipment in Texas for those years amounted to $858.1 million. The cooperative share of this was $36.2 million, or 4.2 percent. The national average share of supplies purchased cooperatively was about 14.5 percent.

These percentages indicate that Texas farmers are lagging far behind the national average in cooperatively purchasing farm supplies. Texas farmers thus have taken only limited advantage of the benefits they can realize by cooperatively purchasing their farm supplies.

As cooperative purchasing expands in Texas and farmers recognize its benefits of quality, service, and economy, efforts might well be directed to expanding services and combining functions at the local level under one organization and management, and within existing associations where possible.

Table 8.—*Cash purchases of selected production supplies by farmers in Texas and sales of such items by farmer cooperatives, 1958-59*

Item	Total supply purchases by farmers	Sales of supplies by cooperatives	Proportion handled by cooperatives
	Million	*Million*	*Percent*
Feed	$307.7	$15.9	5.2
Seed	34.7	2.1	6.1
Fertilizer and lime	46.7	3.4	7.3
Petroleum	119.7	5.4	4.5
Total	$508.8	$26.8	5.3

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